

## **DETAILED ACTION**

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Frank Carroll on April 25, 2008.

The application has been amended as follows:

**Claim 34 has been replaced by –**

A computer-implemented method for solving a current financial portfolio optimization problem inputted by a user of a computer system comprising the steps of:

storing, on a computer, a plurality of data groups each associated with one of a plurality of anticipated financial portfolio optimization problems, each of the data groups including solutions to a corresponding anticipated financial portfolio optimization problem, each of the data groups further including input values and intermediate calculation values associated with the corresponding anticipated financial portfolio optimization problem, wherein said storing occurs before said current financial portfolio optimization problem is input;

compiling, using said computer, said solutions to produce a set of results from said solving anticipated financial portfolio optimization problems;

preparing and storing, on said computer, a plurality of look-up tables for identifying each of said results, the plurality of look-up tables containing equation names, RHS (Right Hand Side) values, and objective values pertaining to the plurality of anticipated financial portfolio optimization problems;

solving, using said computer, the current financial portfolio optimization problem using the stored results from said solved anticipated financial portfolio optimization problems, the solving step including the steps of:

selecting, using user-defined functions, at least one of the stored results using the look-up tables; and determining whether or not the selected result contains solutions to the current financial

portfolio optimization problem;

wherein, if the determining step determines that the selected result contains solutions to the current financial portfolio optimization problem, then the optimal solutions included in the selected result are output as optimal solutions to the current financial portfolio optimization problem; and

wherein, if the determining step determines that the selected result does not contain solutions to the current financial portfolio optimization problem, then the selected result is modified using a search method, and the current financial portfolio optimization problem is iteratively solved using the modified data group to obtain solutions to the current problem.

**Claim 35 has been replaced by –**

A system for solving a current financial portfolio optimization problem inputted by a user of a computer system comprising:

a storage unit, in a computer, storing a plurality of data groups each associated with one of a plurality of anticipated financial portfolio optimization problems, each of the data groups including solutions to a corresponding anticipated financial portfolio optimization problem, each of the data groups further including input values and intermediate calculation values associated with the corresponding anticipated financial portfolio optimization problem,

wherein said storing occurs before said current financial portfolio optimization problem is input; and an optimization unit in said computer, said optimization comprising:

means for compiling a set of results from said solving anticipated financial portfolio optimization problems;

means for preparing and storing a plurality of look-up tables for identifying each of said results, the plurality of look-up tables containing equation names, RHS (Right Hand Side) values, and objective values pertaining to the plurality of anticipated financial portfolio optimization problems; means for solving the current financial portfolio optimization problem using the stored results from said solved anticipated financial portfolio optimization problems, the solving means including:

means for selecting, using user-defined functions, at least one of the results using the look-up tables; and

means for determining whether or not the selected result contains solutions to the current

financial portfolio optimization problem;  
wherein, if the determining means determines that the selected result contains solutions to the current financial portfolio optimization problem, then the solutions included in the selected result are output as solutions to the current financial portfolio optimization problem; and  
wherein, if the determining means determines that the selected result does not contain solutions to the current financial portfolio optimization problem, then the selected result is modified using a search method, and the current financial portfolio optimization problem is iteratively solved using the modified data group to obtain solutions to the current problem.

#### **Allowable Subject Matter**

##### **2. Claims 34 and 35 are allowed.**

The following is a statement of reasons for indication of allowable subject matter. The prior art fails to teach, or suggest, the limitations of:

" determining whether or not the selected result contains solutions to the current financial portfolio optimization problem wherein, if the determining step determines that the selected result contains solutions to the current financial portfolio optimization problem, then the optimal solutions included in the selected result are output as optimal solutions to the current financial portfolio optimization problem and wherein, if the determining step determines that the selected result does not contain solutions to the current financial portfolio optimization problem, then the selected result is modified using a search method, and the current financial portfolio optimization problem is iteratively solved using the modified data group to obtain -solutions to the current problem". (as indicated in independent Claims 34 and 35);

**Sampson et al (US Patent: 5, 802, 499)** discloses a method and system for providing credit support to parties associated with derivative and other financial instruments.

Neither this Patent nor in combination with others teach the feature of "determining whether or not the selected result contains -solutions to the current financial portfolio optimization problem wherein, if the determining step determines that the selected result contains solutions to the current financial portfolio optimization problem, then the optimal solutions included in the

selected result are output as optimal solutions to the current financial portfolio optimization problem and wherein, if the determining step determines that the selected result does not contain solutions to the current financial portfolio optimization problem, then the selected result is modified using a search method, and the current financial portfolio optimization problem is iteratively solved using the modified data group to obtain -solutions to the current problem".

**Hausman et al (US Patent: 6, 086, 619)** discloses Apparatus and method for modeling linear and quadratic programs.

Neither this Patent nor in combination with others teach the feature of "determining whether or not the selected result contains -solutions to the current financial portfolio optimization problem wherein, if the determining step determines that the selected result contains solutions to the current financial portfolio optimization problem, then the optimal solutions included in the selected result are output as optimal solutions to the current financial portfolio optimization problem and wherein, if the determining step determines that the selected result does not contain solutions to the current financial portfolio optimization problem, then the selected result is modified using a search method, and the current financial portfolio optimization problem is iteratively solved using the modified data group to obtain solutions to the current problem".

**Hedging the exchange rate risk in international portfolio diversification; Currency forwards versus currency options** Raimond Maurer, Shohreh Valiani, Managerial Finance.

Patrington: 2007. Vol. 33, Iss. 9; pg. 667) fails to teach or suggest "determining whether or not the selected result contains -solutions to the current financial portfolio optimization problem wherein, if the determining step determines that the selected result contains solutions to the current financial portfolio optimization problem, then the optimal solutions included in the selected result are output as optimal solutions to the current financial portfolio optimization problem and wherein, if the determining step determines that the selected result does not contain solutions to the current financial portfolio optimization problem, then the selected result is modified using a search method, and the current financial portfolio optimization problem is iteratively solved using the modified data group to obtain solutions to the current problem".

**Conclusion**

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CLEMENT B. GRAHAM whose telephone number is (571)272-6795. The examiner can normally be reached on 7am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Abdi can be reached on (571) 272-6702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Frantzy Poinvil/  
Primary Examiner Art Unit 3692

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